

THE CITY OF



PLEASANTON.

January 30, 2012

Bruce H. Wolff  
Executive Director  
State Resources Water Quality Control Board  
San Francisco Region  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

Attention: Ms. Selina Louie

RE: City of Pleasanton's Baseline Trash Load and Short Term Trash Load Reduction Plan

Dear Mr. Wolff:

In compliance with Provision C.10a of the Municipal Regional Permit (MRP), the City of Pleasanton is happy to submit its initial "Baseline Trash Load and Short-Term Trash Load Reduction Plan." The City is submitting this plan prior to the February 1, 2012 deadline, as required by the MRP.

The City's plan includes the baseline trash load estimate and description of methods utilized to determine the load level; description of the Trash Load Reduction Tracking Method that will be utilized to account for trash load reduction actions and to demonstrate progress and achievement of trash load reduction levels; and a Short-Term Trash Loading Reduction Plan that describes control measures that are planned to be implemented to attain a minimum of 40 percent trash load reduction from the City's MS4 by July 1, 2014. Description of Methods utilized to determine the load levels are described in BASMAA progress reports which were submitted on behalf of all permittees including the City of Pleasanton (BASMAA 2011a, b, c, & d and 2012b).

A summary of planned enhanced trash control measures planned to be implemented is provided in Table 5.1 of the report. Table 6.1 in the report provides the preliminary schedule for enhanced trash control measures prior to July 1, 2014.

If you have any question, please feel free to contact me by email at [dsmith@cityofpleasantonca.gov](mailto:dsmith@cityofpleasantonca.gov), phone number (925) 931-5509 or Abbas Masjedi at [amasjedi@cityofpleasantonca.gov](mailto:amasjedi@cityofpleasantonca.gov), phone number (925) 931-5644.

Sincerely,

Daniel Smith  
Director of Operation Services

c: Abbas Masjedi, City of Pleasanton

**OPERATIONS SERVICES DEPARTMENT**

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Administration  
Streets  
Sewer/Storm

Support Services  
Utility Planning  
Water

# Baseline Trash Load and Short-Term Trash Load Reduction Plan

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Submitted by:

THE CITY OF



City of Pleasanton

Operation Services Center

3333 Busch Road

P.O. Box 520

Pleasanton CA 94566-0802

*In compliance with Provisions C.10.a(i) and C.10.a(ii) of Order R2-2009-0074*

January 30, 2012

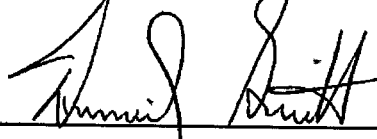
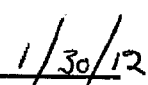
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**City of Pleasanton  
SHORT-TERM TRASH LOAD REDUCTION PLAN**

**CERTIFICATION STATEMENT**

"I certify, under penalty of law, that this document and all attachments were prepared either under my direction or supervision, or were prepared by our consultants or consultants of the Alameda Countywide Clean Water Program in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

**Signature by Duly Authorized Representative:**

   
\_\_\_\_\_  
Daniel Smith  
Director of Operations  
Date

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## ABBREVIATIONS

BASMAA	Bay Area Stormwater Management Agencies Association
BID	Business Improvement District
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CASQA	California Stormwater Quality Association
CDS	Continuous Deflection Separator
CEQA	California Environmental Quality Act
CY	Cubic Yards
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
GIS	Geographic Information System
MRP	Municipal Regional Stormwater NPDES Permit
MS4	Municipal Separate Storm Sewer System
NGO	Non-Governmental Organization
NPDES	National Pollutant Discharge Elimination System
Q	Flow
SFRWQCB	San Francisco Regional Water Quality Control Board
SWRCB	State Water Resource Control Board
TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency
Water Board	San Francisco Regional Water Quality Control Board
WDR	Waste Discharge Requirements

## PREFACE

This Baseline Trash Load and Short-Term Trash Load Reduction Plan (Plan) is submitted in compliance with provision C.10.a(i) and C.10.a(ii) of the Municipal Regional Stormwater NPDES Permit (MRP) for Phase I communities in the San Francisco Bay (Order R2-2009-0074). This Plan was developed using a regionally consistent format developed by the Bay Area Stormwater Management Agencies Association (BASMAA). Based on new information that becomes available during the implementation of this Short-Term Plan (e.g., revisions to baseline loading estimates or load reduction credits of quantification formulas), the City of Pleasanton may choose to amend or revise this Plan. If revisions or amendments are necessary, a revised Short-Term Plan will be submitted to the Water Board via the City of Pleasanton's annual reporting process.

## 1.0 INTRODUCTION

The Municipal Regional Stormwater NPDES Permit for Phase I communities in the San Francisco Bay (Order R2-2009-0074), also known as the Municipal Regional Permit (MRP), became effective on December 1, 2009. The MRP applies to 76 large, medium and small municipalities (cities, towns and counties) and flood control agencies in the San Francisco Bay Region, collectively referred to as Permittees. Provision C.10 of the MRP (Trash Load Reduction) requires Permittees to reduce trash from their Municipal Separate Storm Sewer Systems (MS4s) by 40 percent before July 1, 2014.

Required submittals to the San Francisco Bay Regional Water Quality Control Board (Water Board) by February 1, 2012 under MRP provision C.10.a (Short-Term Trash Loading Reduction Plan) include:

1. (a) Baseline trash load estimate, and (b) description of the methodology used to determine the load level.
2. A description of the Trash Load Reduction Tracking Method that will be used to account for trash load reduction actions and to demonstrate progress and attainment of trash load reduction levels.
3. A Short-Term Trash Loading Reduction Plan that describes control measures and best management practices that will be implemented to attain a 40 percent trash load reduction from its MS4 by July 1, 2014;

This Short-Term Trash Load Reduction Plan (Short-Term Plan) is submitted by the City of Pleasanton in compliance with the portions of MRP provision C.10.a.i listed as 1a and 3 above. In compliance with 1b, BASMAA submitted a progress report on behalf of Permittees that briefly describes the methodologies used to develop trash baseline loads (BASMAA 2011a). These methods are more fully described in BASMAA (2011b, 2011c). Lastly, the *Trash Load Reduction Tracking Method Technical Report* (BASMAA 2011d) was submitted by BASMAA on behalf of Permittees in compliance with submittal 2 described above. The Baseline Loading Rates and Tracking Method projects are briefly described below.

### Baseline Trash Generation Rates Project

Through approval of a BASMAA regional project, Permittees agreed to work collaboratively to develop a regionally consistent method to establish baseline trash loads from their MS4s. The project, also known as the *BASMAA Baseline Trash Generation Rates Project* assists Permittees in establishing a baseline to demonstrate progress towards MRP trash load reduction goals (i.e., 40 percent). The intent of the project was to provide a scientifically-sound method for developing (default) baseline trash generation rates that can be adjusted, based on Permittee/site specific conditions; and used to develop baseline loading rates and loads. Baseline loads form the reference point for comparing trash load reductions achieved through control measure implementation.

Baseline trash loading rates are quantified on a volume per unit area basis and based on factors that significantly affect trash generation (e.g., land use, population density, and economic profile). The method used to establish baseline trash loads for each Permittee builds off of “lessons learned” from previous trash loading studies conducted in urban areas (Allison and Chiew 1995; Allison et al. 1998; Armitage et al. 1998; Armitage and Rooseboom 2000; Lippner et al. 2001; Armitage 2003; Kim et al. 2004; County of Los Angeles 2002, 2004a, 2004b; Armitage 2007). The method is based on a conceptual model developed as an outgrowth of these studies (BASMAA 2011b). Baseline trash loading rates were

developed through the quantification and characterization of trash captured in Water Board recognized full-capture treatment devices installed in the San Francisco Bay area. Methods used to develop trash baseline loading rates are more fully described in BASMAA (2011b, 2011c, and 2012b).

## **Trash Load Reduction Tracking Method Summary**

The trash load reduction tracking method, described in the *Trash Load Reduction Tracking Method Technical Report*, assists Permittees in demonstrating progress towards reaching trash load reduction goals defined in the MRP (e.g., 40 percent). The tracking method is based on information gained through an extensive literature review and Permittees' experiences in implementing stormwater control measures in the San Francisco Bay Area. The literature review was conducted to evaluate quantification methods used by other agencies to assess control measure effectiveness or progress towards quantitative goals. Results are documented in the *Trash Load Reduction Tracking Method: Technical Memorandum # 1 – Literature Review* (BASMAA 2011d).

Methods attributable to specific trash control measures fall into two categories: 1) trash load reduction quantification formulas; and 2) load reduction credits (BASMAA 2012b). Quantification formulas were developed for those trash control measures that were deemed feasible and practical to quantify load reductions at this time. Load reduction credits were developed for all other control measures included in the methodology development. Both categories of methods assume that as new or enhanced trash control measures are implemented by Permittees, a commensurate trash load reduction will occur. Progress towards load reduction goals will be demonstrated through comparisons to established trash baseline load estimates developed through the BASMAA *Baseline Generation Rates Project*.

## **Short-Term Trash Load Reduction Plan**

The purpose of this Short-Term Plan is to describe the current level of implementation of control measures and best management practices, and identify the type and extent to which new or enhanced control measures and best management practices will be implemented to attain a 40 percent trash load reduction from their MS4 by July 1, 2014. The Short-Term Plan was developed using a template created by BASMAA through a regional project. New and enhanced trash control measures (i.e., Best Management Practices) that Permittees may implement to demonstrate trash load reduction goals are included in Table 1.1. This list was developed collaboratively through the BASMAA Trash Committee, which included participation from Permittee, stormwater program, Water Board and non-governmental organization (NGO) staff. The list of control measures is based on: 1) the potential for Permittees to implement; 2) the availability of information required to populate formulas and develop credits; and 3) the expected benefit of implementation. Load reductions associated with each control measure are demonstrated either through a quantification formula (QF) or credits (CR) described in the *Trash Load Reduction Tracking Method Technical Report* (BASMAA 2012b).

In efforts to reduce trash discharged from MS4s, Permittees may choose to implement control measures that are not included in Table 1.1 or described more fully in BASMAA (2012b). If a Permittee chooses to do so, methods specific to calculating trash load reductions for that control measure would need to be developed. Additionally, at that point, consideration should be given to updating this Short-Term Plan.

Additionally, based on new information that becomes available during the implementation of this Short-Term Plan (e.g., revisions to baseline loading estimates or load reduction credits of quantification formulas, etc), or if circumstances arise during implementation of the Plan that were not anticipated at

the time of submission, the City of Pleasanton may amend or revise this Plan. If revisions or amendments are necessary, a revised Short-Term Plan will be submitted to the Water Board via the City of Pleasanton's annual reporting process.

**Table 1.1.** Trash control measures for which load reduction quantification credits or formulas were developed to track progress towards trash load reduction goals.

<b>Load Reduction Credits</b>
Single-use Carryout Plastic Bag Ordinances
Polystyrene Foam Food Service Ware Ordinances
Public Education and Outreach Programs
Activities to Reduce Trash from Uncovered Loads
Anti-Littering and Illegal Dumping Enforcement Activities
Improved Trash Bin/Container Management Activities
Single-Use Food and Beverage Ware Ordinances
<b>Quantification Formulas</b>
On-land Trash Pickup (Volunteer and/or Municipal)
Enhanced Street Sweeping
Partial-Capture Treatment Devices
Enhanced Storm Drain Inlet Maintenance
Full-Capture Treatment Devices
Creek/Channel/Shoreline Cleanups (Volunteer and/or Municipal)

This Short-Term Plan is organized into the following sections:

- Introduction;
- Trash Baseline Load Estimate;
- Load Reduction Calculation Process
- Planned Implementation of New or Enhanced Control Measures;
- Implementation Schedule; and
- References

## 2.0 BASELINE TRASH LOADING ESTIMATE

**Note:** Tables and information presented in this section are subject to change based on the results of a third monitoring event of the BASMAA Baseline Trash Loading Rates Project. Therefore, this section of the Short-Term Plan may be updated with revised trash generation rates, baseline loading rates, and baseline loads.

This section provides the estimated annual trash baseline load from the City of Pleasanton's Municipal Separate Storm Sewer System (MS4). In compliance with Provision C.10.a.ii of the MRP, the City of Pleasanton worked collaboratively with other MRP Permittees through BASMAA to develop data and the process necessary to establish baseline trash loading estimate from its MS4. The collaborative project was managed through the BASMAA Trash Committee and included a series of steps described in BASMAA report (2012b) and listed below. The approach was intended to be cost-effective and consistent, but still provide an adequate level of confidence in trash loads from MS4s, while acknowledging that uncertainty in trash loads still exists. The approach entailed the following steps:

1. Conduct literature review;
2. Develop conceptual model;
3. Develop and implement sampling and analysis plan;
4. Test conceptual model;
5. Develop and apply default trash generation rates to Permittee effective loading areas;
6. Adjust default trash generation rates based on baseline levels of control measure implementation by the Permittee to develop trash baseline loading rates; and,
7. Calculate Permittee-specific annual trash baseline load.

Through the collaborative BASMAA project, default baseline trash generation rates (volume per area) were developed for a finite set of categories, based on factors that significantly affect trash loads (e.g., land use). These trash generation rates were then applied to effective loading areas in applicable jurisdictional areas within the City of Pleasanton. Trash generation rates were then adjusted based on baseline street sweeping, storm drain inlet maintenance, and stormwater pump station maintenance conducted in each applicable area. The sum of the trash loads (i.e., rate multiplied by area) from each effective loading area represents the City of Pleasanton's baseline trash load from its MS4. A full description of the methods by which trash baseline loads were developed is included in BASMAA (2012b) and is summarized below.

### Permittee Characteristics

Incorporated in 1894, the City of Pleasanton covers 15,056 acres in Alameda County, and has a jurisdictional area of 9,423 acres. According to the 2010 Census, it has a population of 70,285, with a population density of 2,896.5 people per square mile, and average household size of 2.77. Of the 70,285 who call the City of Pleasanton home, 27.1% are under the age of 18, 6.2% are between 18 and 24, 24.6% are between 25 and 44, 31.3% are between 45 and 65, and 10.9% are 65 or older.

Top employers in the City of Pleasanton include Kaiser Permanente, Safeway (headquarters), Oracle, Pleasanton Unified School District and Valley Care Medical Center. The City is also home to Stoneridge Shopping Center. The median household income was \$113,345 in 2000<sup>1</sup>.

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<sup>1</sup> From the 2000 Census. The median household income for the City of Pleasanton from the 2010 Census is not currently available.

## Default Trash Generation Rates (Regional Approach)

A set of default trash generation rates was developed via the BASMAA regional collaborative project (BASMAA 2012b). Default generation rates were developed based on a comparison between trash characterization monitoring results, land uses, economic profiles, and other factors that were believed to possibly affect trash generation. Three trash characterization monitoring events were scheduled via the *Trash Loading Rates Project*. Due to the compliance timeline in the MRP, only two of three trash characterization monitoring events were used to develop trash generation rates described in BASMAA (2012b) and presented in this section. Following the completion of the third characterization event (Winter 2011/12), this section of the Short-Term Plan may be updated to reflect the most up-to-date trash generation and loading rates available. Trash generation rates based on the results of two of the three characterization events are shown in Table 2-1 for each trash loading category.

**Table 2-1: Regional Default Annual Trash Generation Rates by Land Use Category.**

Land Use Category	Generation Rates (Gallons/Acre)
Retail and Wholesale	29.99
High Density Residential	17.04
K-12 Schools	13.14
Commercial and Services/ Heavy, Light and Other Industrial	7.08
Urban Parks	2.14
Low Density Residential	1.25
Rural Residential	0.17

## Jurisdictional and Effective Loading Areas

Default trash baseline generation rates presented in Table 2-1 were applied to effective loading areas with jurisdictional areas within the City of Pleasanton. The City of Pleasanton's jurisdictional areas includes all urban land areas within the City of Pleasanton boundaries that are subject to the requirements in the MRP. Land use areas identified by a combination of the ABAG 2005 land use dataset and Permittee knowledge that were not included within the City's jurisdictional areas include:

- Federal and State of California Facilities and Roads (e.g., Interstates, State Highways, Military Bases, Prisons);
- Roads Owned and Maintained by Alameda County;
- Colleges and Universities (Private or Public);
- Non-urban Land Uses (e.g., agriculture, forest, rangeland, open space, wetlands, water);
- Communication or Power Facilities (e.g., PG & E Substations);
- Water and Wastewater Treatment Facilities; and
- Other Transportation Facilities (e.g., airports, railroads, and maritime shipping ports).

Once the City of Pleasanton's jurisdictional area was delineated, an effective trash loading area was developed by creating a 200-foot buffer around all streets within the City's jurisdictional area. The purpose of the effective loading area is to eliminate land areas not directly contributing trash to the City's MS4 (e.g., large backyards and rooftops). Both the jurisdictional and the effective loading areas for the City of Pleasanton are presented in Table 2-2.

**Table 2-2: Jurisdictional areas and effective loading areas in the City of Pleasanton by land use classes identified by ABAG (2005).**

Land Use Category	Jurisdictional Area (Acres)	Effective Loading Area (Acres)	% of Effective Loading Area
High Density Residential	689	619	8
Low Density Residential	6,158	5,175	64
Rural Residential	763	224	3
Commercial and Services/ Heavy, Light and Other Industrial	2,148	1,221	15
Retail and Wholesale	419	273	3
K-12 Schools	279	140	2
Urban Parks	980	396	5
<b>TOTAL</b>	<b>11,436</b>	<b>8,048</b>	<b>100%</b>

## Permittee-Specific Baseline Trash Loading Rates

Regional default trash generation rates developed through the BASMAA regional collaborative project were applied to effective loading areas within the City of Pleasanton based on identified land uses. These generation rates were then adjusted based on the calculated effectiveness of baseline street sweeping, storm drain inlet maintenance and pump station maintenance implemented by the City. These adjustments were conducted in GIS due to the site specificity of baseline generation rates and baseline control measure implementation. The following sections describe the baseline level of implementation for these three control measures. A summary of trash baseline generation and loading rates for the City of Pleasanton are provided in Table 2-3 and areas associated with these rates are illustrated in Figure 2-1.

### ***Baseline Street Sweeping***

A "baseline" street sweeping program is defined as the sweeping frequency and parking enforcement implemented by the City of Pleasanton prior to effective date of the MRP. Baseline street sweeping differs from "enhanced" street sweeping, which includes increased parking enforcement and/or sweeping conducted at a frequency greater than baseline ceiling (i.e., once per week for retail land uses and twice per month for all other land uses). The baseline ceiling was created to not penalize implementers of enhanced street sweeping programs prior to the effective date of the MRP. For those Permittees that sweep less frequent than the baseline ceiling, their current sweeping frequency serves as their baseline.

The City of Pleasanton's baseline street sweeping program includes sweeping most streets in residential areas once per month. Most arterial roads and industrial and commercial areas are swept twice per month, and the downtown area is swept once per week.

The City's current street sweeping program includes sweeping most residential streets once per month. Most arterial roads and industrial and commercial areas are swept either twice per month, once per week, or twice per week. The downtown area is swept twice per week.

Posting of parking enforcement signs for street sweeping does not occur within the City. A parking enforcement equivalent is very limited within the City. The estimated trash load reduced via baseline street sweeping is presented in Table 2-3.

### ***Baseline Storm Drain Inlet Maintenance***

Within the City, storm drain inlets were cleaned at a baseline level of one time per year prior to the effective date of the MRP. Based on this baseline frequency and the effectiveness rating developed in BASMAA (2012b), the baseline storm drain maintenance program in the City of Pleasanton has an annual effectiveness rating of 5%. The estimated trash load reduced via baseline storm drain inlet maintenance is presented in Table 2-3.

### ***Baseline Stormwater Pump Station Maintenance***

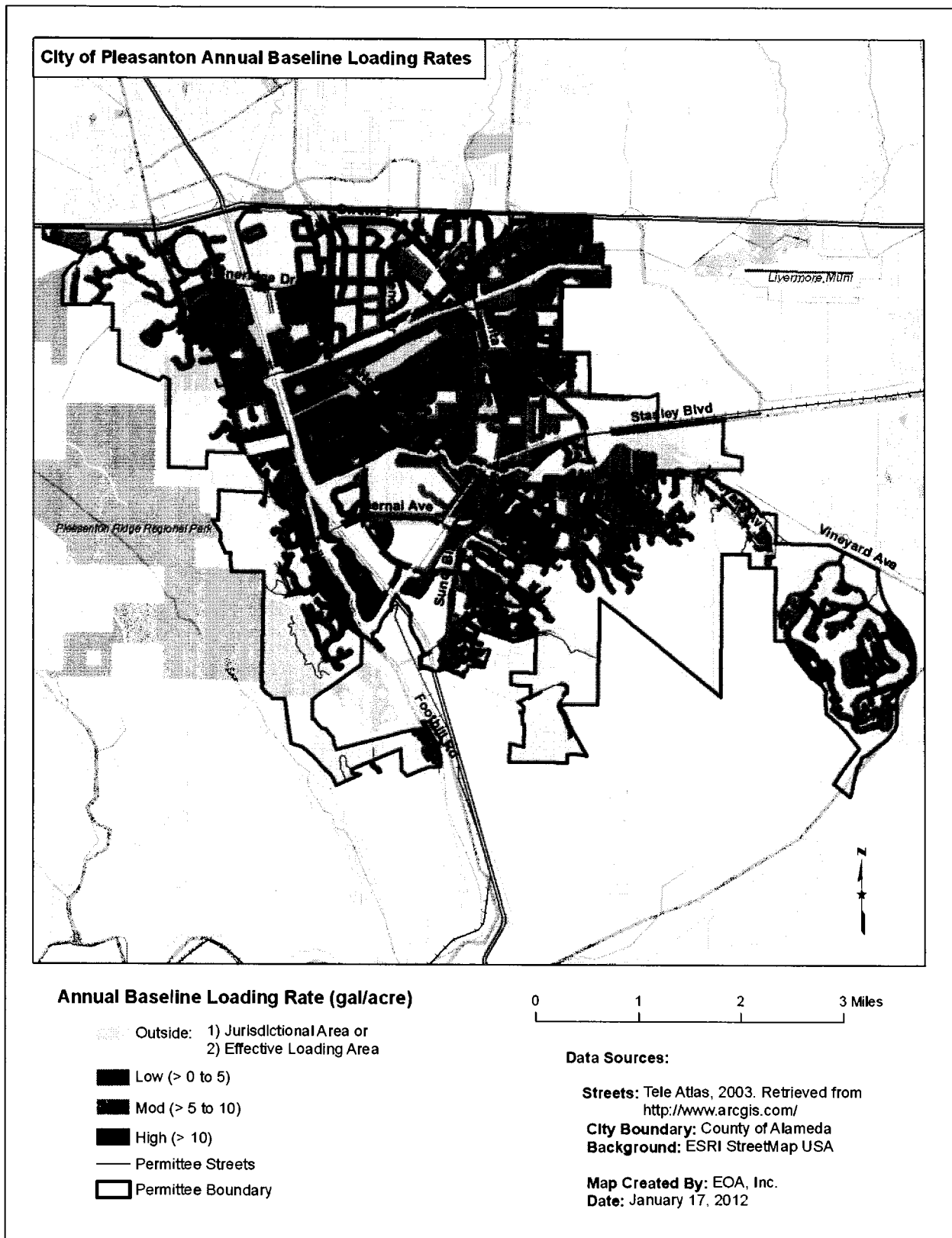
The City of Pleasanton owns and maintains four stormwater pump stations, but none of these stations have trash racks that capture trash and allow for removal during maintenance.

## **Baseline Trash Loading Estimate**

The estimated baseline trash load from the City of Pleasanton was calculated as the sum of the loads from the City's effective loading area, adjusted for baseline implementation of street sweeping, storm drain inlet maintenance, and pump station maintenance. The preliminary annual trash baseline load for the City of Pleasanton is presented in Table 2-3. Preliminary baseline trash loading rates are presented in Figure 2-1 to provide a geographical illustration of areas with estimated low, moderate, high, and very high trash loading rates.

**Table 2-3: Preliminary annual trash baseline load for the City of Pleasanton.**

<b>Category</b>	<b>Annual Load (gallons)</b>
Preliminary Generation Trash Load	36,576
Load Removed via Baseline Street Sweeping	12,145
Load Removed via Baseline Storm Drain Inlet Maintenance	1,222
Load Removed via Baseline Stormwater Pump Station Maintenance	0
<b>Preliminary Trash Baseline Load</b>	<b>23,209</b>



**Figure 2-1: Estimated trash baseline loading rates for geographical areas in the City of Pleasanton.**

## 3.0 LOAD REDUCTION CALCULATION PROCESS

Using the guiding principles and assumptions described BASMAA (2012b), a stepwise process for calculating trash load reductions was developed collaboratively through BASMAA. This process is fully described in Trash Load Reduction Tracking Method Technical Report (BASMAA 2012b) and is briefly summarized in this section. The process takes into account at what point in the trash generation and transport process a trash control measure: 1) prevents trash generation, 2) intercepts trash in the environment prior to reaching a water body, or 3) removes trash that has reached a water body. In doing so, it avoids double-counting of trash load reductions associated with specific control measures.

To demonstrate trash load reductions, baseline trash loading rates will be adjusted using the following process:

**Step #1:** Existing Enhanced Street Sweeping

**Step#2:** Trash Generation Reduction

**Step #3:** On-land Interception

**Step #4:** Trash Interception in the Stormwater Conveyance System

**Step #5:** Trash Interception in Waterways

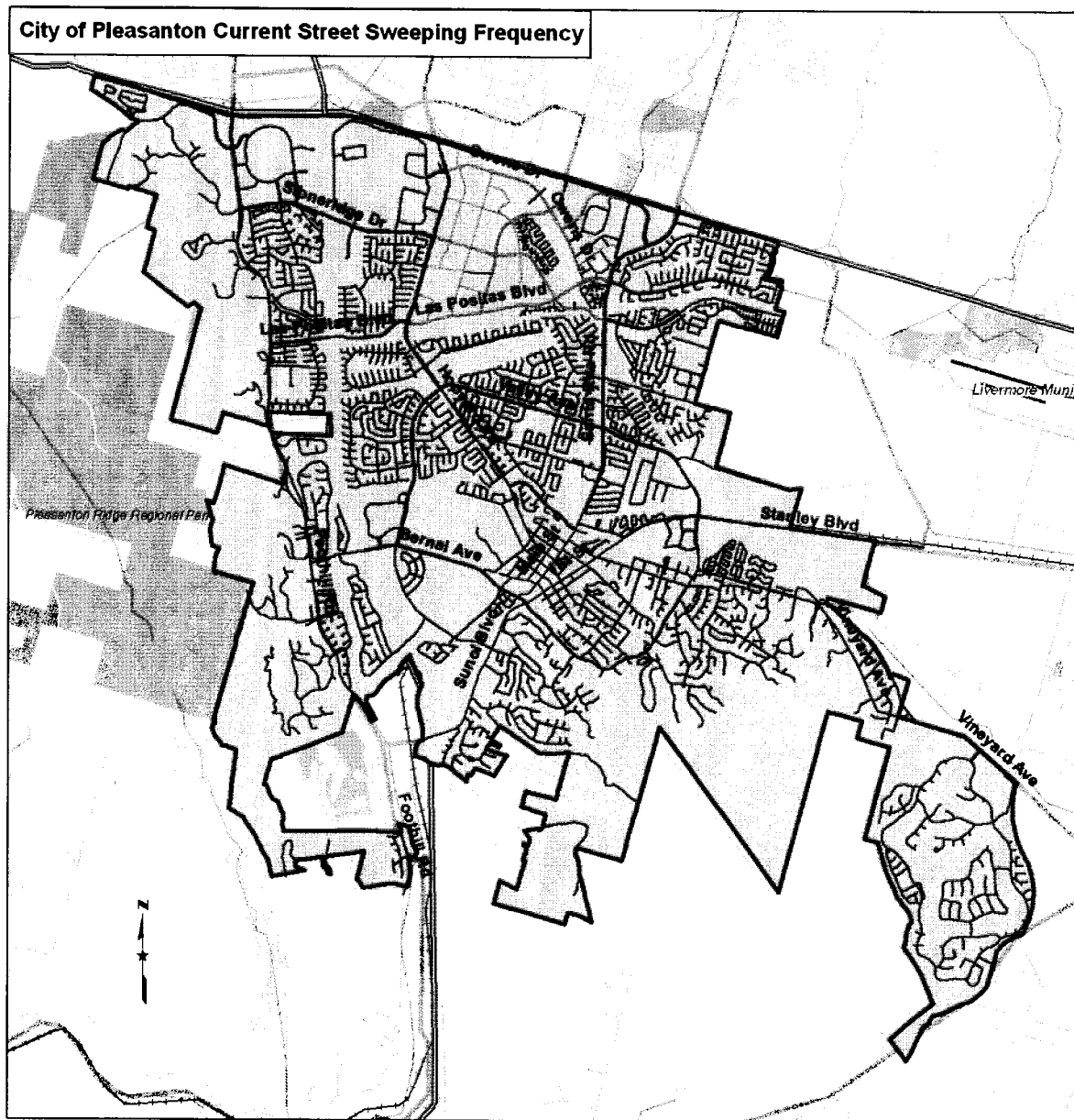
**Step #6:** Comparison to Baseline Trash Load

Reductions calculated in Steps 2 and 5 are assumed to be implemented at a constant rate on an “area-wide” basis. For example, if a new region-wide public education strategy is implemented within the San Francisco Bay area, all Permittees can apply load reduction credits associated with this control measure. In contrast, Steps 1, 3, and 4 are “area-specific” reductions that only apply to specific areas within a Permittee’s jurisdiction. Area-specific control measures include full-capture treatment devices and enhanced street sweeping. Area-specific reductions may require the use of a Geographic Information System (GIS) to calculate.

Reductions are generally applied in the sequence as presented in Figure 2-1 and described below, although some reductions may be applied “in-parallel” and calculated during the same sub-step in the process.

### **Step #1: Existing Enhanced Street Sweeping**

Trash load reductions, due to existing enhanced street sweeping implemented prior to the effective date of the MRP and conducted at levels above baseline levels, are not incorporated into each Permittee’s trash baseline load. Therefore, load reductions associated with existing enhanced street sweepings are accounted for first in the trash load reduction calculation process. Existing enhanced street sweeping includes street sweeping conducted at a frequency greater than 1x/week for streets within retail land use areas or greater than 2x/month for streets in all other land use areas. The result of adjustments made to trash baseline loads due to the implementation of existing enhanced street sweeping is a set of current baseline loading rates and a current baseline load.



#### Current Street Sweeping Frequency

- Not Swept
- 2x/Week
- - - 1x/Week
- 2x/Month
- 1x/Month
- ▬ Permittee Boundary

0 1 2 3 Miles

#### Data Sources:

**Streets:** Tele Atlas, 2003. Retrieved from <http://www.arcgis.com/>

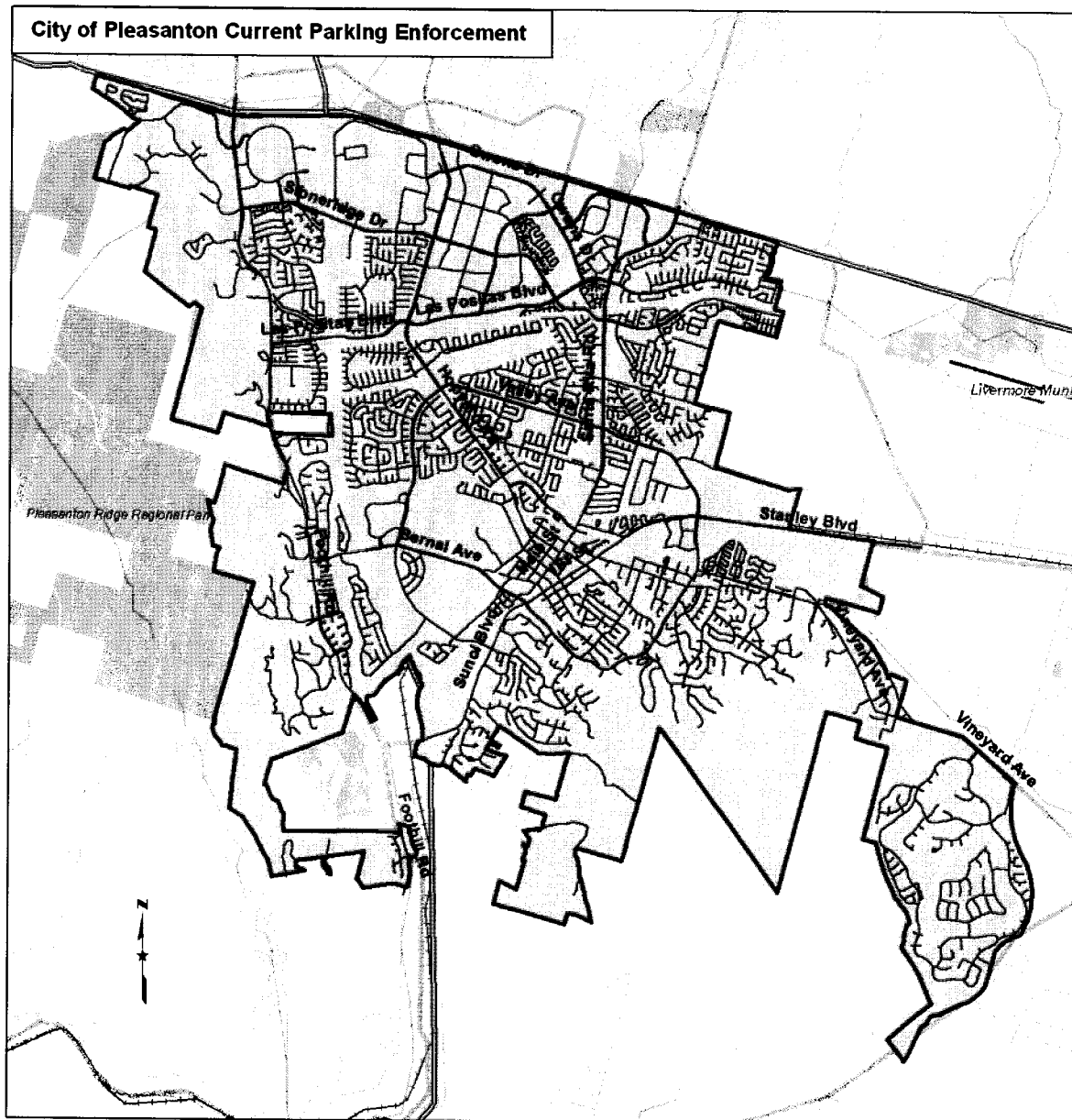
**City Boundary:** County of Alameda

**Background:** ESRI StreetMap USA

**Map Created By:** EOA, Inc.

**Date:** December 15, 2011

**Figure 2.2: Current Street Sweeping Frequency**



**Current Parking Enforcement**

- Not Enforced
- Parking Enforcement Equivalent

0 1 2 3 Miles

**Data Sources:**

**Streets:** Tele Atlas, 2003. Retrieved from <http://www.arcgis.com/>

**City Boundary:** County of Alameda

**Background:** ESRI StreetMap USA

**Map Created By:** EOA, Inc.

**Date:** December 15, 2011

**Figure 2.3: Current parking enforcement**

## **Step #2: Trash Generation Reduction Control Measures**

Trash generation reduction control measures prevent or greatly reduce the likelihood of trash from being deposited onto the urban landscape. They include the following area-wide control measures:

- CR-1: Single-Use Carryout Plastic Bag Ordinances
- CR-2: Polystyrene Foam Food Service Ware Ordinances
- CR-3: Public Education and Outreach Programs
- CR-4: Reduction of Trash from Uncovered Loads
- CR-5: Anti-Littering and Illegal Dumping Enforcement
- CR-6: Improved Trash Bin/Container Management
- CR-7: Single-Use Food and Beverage Ware Ordinances

Load reductions associated with trash generation reduction control measures are applied on an area-wide basis.<sup>2</sup> Therefore, reductions in current baseline loading rates are adjusted uniformly based on the implementation of the control measure and the associated credit claimed.

Baseline loading rate adjustments for all generation reduction controls measures implemented may be applied in-parallel, but should be applied prior to calculating on-land interception measures discussed in Step #3. The result of adjustments to trash baseline loading rates due to the implementation of these enhanced control measures will be a set of street loading rates. The street load is the volume of trash estimated to enter the environment and available for transport to the MS4 if not intercepted via on-land control measures described in Step #2.

## **Step #3: On-land Interception Control Measures**

Once trash enters the environment, it may be intercepted and removed through the following control measures prior to reaching the stormwater conveyance system:

- QF-1: On-land Trash Cleanups (Volunteer and/or Municipal) (Area-wide)
- QF-2: Enhanced Street Sweeping (Area-specific)

Since on-land trash cleanups can affect the amount of trash available to street sweepers, load reductions associated with their implementation will be quantified first, followed by street sweeping enhancements. On-land trash cleanups will be applied as an area-wide reduction and all effective loading rates will be adjusted equally. Enhanced street sweeping, however, is an area-specific control measure and only those effective loading rates associated with areas receiving enhancements will be adjusted. Due to the spatial nature of enhanced street sweeping, GIS may be needed to conduct this step.

The result of adjustments to effective loading rates due to the implementation of these enhanced control measures will be a set of conveyance system loading rates. The conveyance load is the volume of trash estimated to enter the stormwater conveyance system (e.g., storm drains).

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<sup>2</sup> The only exception to this statement are load reductions associated with the establishment of Business Improvement Districts (BIDs) or equivalent, which are specific to geographic areas and considered "area-specific".

## Step #4: Control Measures that Intercept Trash in the MS4

Control measures that intercept trash in the stormwater conveyance system are area-specific. Therefore, they only apply to land areas and associated trash loads reduced. Conveyance system loading rates developed as a result of Step #3 should be adjusted in-parallel for the following control measures:

- QF-3a: Partial-capture Treatment Device: Curb Inlet Screens (Area-specific)
- QF-3b: Partial-capture Treatment Device: Stormwater Pump Station Trash Racks Enhancements (Area-specific)
- QF-4: Enhanced Storm Drain Inlet Maintenance (Area-specific)
- QF-5: Full-Capture Treatment Devices (Area-specific)

Load reductions for these control measures are calculated in-parallel because they are applied to independent geographical areas. Reductions from all control measures described in this step are area-specific and may require the use of GIS to calculate a set of waterway loading rates. Once waterway loading rates have been determined, a waterway load will be developed and used as a starting point for calculating load reductions associated with trash interception in waterways discussed in Step #5.

## Step #5: Control Measures that Intercept Trash in Waterways

The load of trash that passes through the stormwater conveyance system without being intercepted may still be removed through interception in waterways. There are two control measures associated with interception in waterways:

- QF-3c: Partial-capture Treatment Device: Litter Booms/Curtains (Area-wide)
- QF-7: Creek/Channel/Shoreline Cleanups (Volunteer and/or Municipal) (Area-wide)

As these control measures are implemented, load reduction estimates can be calculated in-parallel for these two measures.

## Step #6: Comparison to Baseline Trash Load

Applying the four steps described in the processes above will provide an estimated trash load (volume) remaining after trash control measures are implemented. As depicted in the following equation, the relative percent difference between the baseline load and the load remaining after control measures are implemented is the percent reduction that will be used to assess progress towards MRP trash load reduction goals.

$$\frac{\text{Baseline Load} - \text{Remaining Load}}{\text{Baseline Load}} = \% \text{ Reduction}$$

## 4.0 ENHANCED TRASH CONTROL MEASURES

This section describes the new or enhanced trash control measures planned for implementation by the *City of Pleasanton*. The enhanced control measures described are designed to reach a minimum 40% reduction by July 1, 2014. New and enhanced control measures that will be implemented by *City of Pleasanton* include those listed in Table 5.1.

**Table 4.1 Trash control measures that will be implemented by *City of Pleasanton* to reach the 40% trash load reduction.**

Control Measure
Single-use Carryout Plastic Bag Ordinances
Polystyrene Foam Food Service Ware Ordinances
Public Education and Outreach Programs
Activities to Reduce Trash from Uncovered Loads
Improved Trash Bin/Container Management (Municipally or Privately-Controlled)
On-land Trash Pickup (Volunteer and/or Municipal)
Full-Capture Treatment Devices
Creek/Channel/Shoreline Cleanups (Volunteer and/or Municipal)

## **CR-1: Single-use Carryout Plastic Bag Policy**

Single-use plastic carryout bags have been found to contribute substantially to the litter stream and to have adverse effects on marine wildlife (United Nations 2009, CIWMB 2007, County of Los Angeles 2007). The prevalence of litter from plastic bags in the urban environment also compromises the efficiency of systems designed to channel storm water runoff. Furthermore, plastic bag litter leads to increased clean-up costs for the Permittees and other public agencies.

Based on recent experiences of municipalities throughout the State, the process Permittees must go through to enact a single-use carryout plastic bag policy/ordinance is difficult due to intense scrutiny and opposition from not only public interest groups and lobbyists, but also merchants and community members. In most cases, most opposition groups are pressing for the development of Environmental Impact Reports (EIRs) in accordance with the California Environmental Quality Act (CEQA).

### **Baseline Level of Implementation**

Prior to adoption of the MRP, Permittees within the Bay area have enacted policies or ordinances on Single-use Carryout Plastic Bags. To avoid penalizing these early implementers, an applicable control measure implemented by a Permittee prior to the effective date of the MRP will be credited equally to a control measure implemented after the effective date. Therefore, the baseline level of implementation is not applicable for this control measure.

### **Enhanced Level of Implementation**

On January 25, 2012, the Alameda County Waste Management Authority (StopWaste.org) adopted a countywide ordinance for all the jurisdictions within Alameda County prohibiting the distribution of single-use carryout plastic bags at the cash register at retail stores covered by the ordinance and establishing mandatory fees for other carryout bags. Jurisdictions may decide to opt out of the ordinance. The City of Pleasanton is not opting out. The ordinance will take effect on January 1, 2013, affecting all retail stores that sell packaged food in the City. Single-use plastic carryout bags are banned. A minimum fee of 10 cents will be charged for every paper carryout bag or reusable plastic carryout bag provided to the customer at the cash register. The total percent of trash reduced from MS4s as a result of implementing this single-use carryout bag reduction ordinance will be reported in the Annual Report submitted each September to the Water Board.

### ***Reduction from Implementing Control Measure***

The City of Pleasanton will receive a 10 percent reduction credit for implementing specific enhanced control measures described in Enhanced Level of Implementation section above. The 10 percent reduction credit will be applied to the City of Pleasanton's baseline trash load. This percent reduction credit is consistent with methods presented in the BASMAA (2012b). A summary of all load reductions anticipated through the implementation of this plan are included in Section 5.0.

## **CR-2: Polystyrene Foam Food Service Ware Policy**

Polystyrene foam is used as food ware in the food service industry. According to the USEPA, floatable debris in waterways, such as products made of polystyrene, is persistent in the environment and has physical properties that can have serious impacts on human health, wildlife, the aquatic environment and the economy (USEPA 2002). Due to its properties, polystyrene foam used as food ware is typically not recycled. Since 1990, over 100 government agencies within the United States, including over twenty within the Bay area have enacted full or partial bans on polystyrene foam food service ware.

### **Baseline Level of Implementation**

Prior to adoption of the MRP, over twenty agencies within the Bay area enacted full or partial bans on polystyrene foam food service ware. To avoid penalizing these early implementers, an applicable control measure implemented by a Permittee prior to the effective date of the MRP will be credited equally to a control measure implemented after the effective date. Therefore, the baseline level of implementation is not applicable for this control measure.

### **Enhanced Level of Implementation**

The City of Pleasanton *plans to adopt an a policy ratified by an ordinance* banning polystyrene foam food service ware at all point-of-sale locations. The policy will ban the use of polystyrene foam food ware at all City sponsored events, City owned properties. The policy will also prohibit food service establishments that sell take-out beverages and/or food from distribution of polystyrene foam food and beverage ware and instead utilize compostable containers. The *policy is planned to become effective in July 2013*. The percentage of trash reduction from MS4s as a result of implementing a polystyrene foam food service ware policy will be reported in the Annual Report submitted each September.

### **Percent Reduction from Enhancements**

The City of Pleasanton will receive an 8 percent reduction credit for implementing specific enhanced control measures described in *Enhanced Level of Implementation* section above. The 8 percent reduction credit will be applied to the City of Pleasanton's baseline trash load. This percent reduction credit is consistent with methods presented in the BASMAA report (2012b). A summary of all load reductions anticipated through the implementation of this plan are included in Section 5.0.

## CR-3: Public Education and Outreach Programs

Permittees in the San Francisco Bay Area have implemented public education and outreach programs to inform residents about stormwater issues relating to pollutants of concern, watershed awareness and pollution prevention. Public education and outreach efforts include developing and distributing brochures and other print media; posting messages on websites and social networking media (Facebook, Twitter, etc.) attending community outreach events, and conducting media advertising. In recent years, some municipal agencies have implemented anti-litter campaigns to increase public awareness about the impacts of litter on their communities and water quality; and to encourage the public to stop littering.

### Baseline Level of Implementation

The City of Pleasanton implemented the following public education and outreach control measures prior to the effective date of the MRP. The outreach events included; Alameda County Fair booth, Public Outreach booth on Earth Day, Pleasanton Farmers' Market, Alisal Elementary School's Environmental Fair, Alameda County's Spring Home and Garden Show, and Northern California Boy Scout Jamboree. These control measures are considered baseline because they were either not related to trash reduction specifically, or they are not planned to be continued during the term of the MRP. New actions or actions started prior to the effective date of the MRP and continued into the future are described under the next section.

### Enhanced Level of Implementation

The City of Pleasanton will implement the following public education and outreach control measures prior to July 1, 2014.

#### Litter Reduction Advertising Campaign(s)

##### ***BASMAA Youth Outreach Campaign (Regional)***

Through participation and funding of the regional BASMAA Youth Outreach Campaign, the *Alameda County Clean Water Program, on behalf of the City of Pleasanton*, will implement an outreach campaign designed to reduce littering from the target audience in the Bay Area. The Youth Outreach Campaign was launched in September 2011 (post-MRP effective date) and aims to increase the awareness of Bay Area Youth (ages 16-24) on litter and stormwater pollution issues, and eventually change their littering behaviors. Combining the ideas of Community Based Social Marketing with traditional advertising, the Youth Campaign aims to engage youth to enable the peer-to-peer distribution of Campaign messages. The Campaign will at least run from FY 11-12 through FY 13-14. A brief description of the Campaign activities is provided below:

- Raising Awareness: The Campaign will begin by raising awareness of the target audience on litter and stormwater pollution issues. Partnerships with youth commissions, high schools, and other youth focused organizations will be developed to reach the target audience. Messages targeted to youth will be created and distributed via paid advertising, email marketing, Campaign website and social networking sites (e.g., Facebook and twitter).
- Engage the Youth - The advertisements will encourage the audience to participate in the Youth Campaign by joining a Facebook page, entering a contest, taking an online quiz,

etc., and providing their contact information. At the beginning of FY 12-13, a video contest will be launched to get Bay Area youth further involved in the Campaign. An online voting system will be used to select the winning entry. Media advertising will be conducted to promote the winning entry.

- Change Behaviors: To move the audience along the behavior change continuum, the Campaign will use electronic platforms such as email marketing and social networking sites to encourage participants to engage in increasingly more difficult behavior changes, such as participating in a clean-up, organizing a clean-up, etc.
- Maintain Engagement: The Campaign will continue to interact with the target audience through email marketing and social media websites.

The Youth Campaign will include a pre and post campaign survey to evaluate the effectiveness of outreach. The pre-campaign survey will be conducted in FY 11-12 and the post campaign survey in FY 13-14. Other evaluation mechanisms, such as website hits, number of youth engaged in the Campaign's social networking website, etc. will also be used to evaluate its effectiveness in increasing awareness and changing behavior.

#### **Advertising campaign(s) (Countywide Program)**

Outreach to Alameda County youth may be limited by scope and budget of the BASMAA Regional Youth Campaign. Therefore the Clean Water Program will supplement the Regional Youth Outreach campaign in order to increase the number of participants in Alameda County.

#### ***Advertising Campaign***

*The City of Pleasanton plans to implement public outreach campaign events to educate the public about the MRP requirements. Following is a list of events planned to be implemented:*

- 1) Public outreach brochures informing the public about pollution resulted from disposing trash in the environment and means available for public to get involved in removing trash from their community.*
- 2) Plan two events during each year for volunteers in the community to participate in removing trash from public waterways.*
- 3) Broadcast public outreach message on local radio stations informing the community about not disposing trash in the environment and means/events available for volunteers in the community to get involved.*

#### **Outreach to School-age Children or Youth**

The Countywide Program is currently conducting stormwater pollution prevention and anti-littering outreach to school-age children through contracts with five environmental education organizations. The current contracts expire in 2014. The Program intends to initiate new contracts for outreach to school-age children in 2014. The outreach programs will have an increased focus on anti-littering messages and will be revised to fulfill the required number of events as described in BASMAA (2012b). The *City of Pleasanton* plans to implement this control measure through participation in the Countywide Program.

## **Media Relations**

### ***BASMAA Regional Media Relations Project (Regional)***

Through participation and funding of the BASMAA Regional Media Relations Project, the *City of Pleasanton* plans to continue implementing a media relations project partially designed to reduce littering from target audiences in the Bay Area. The goal of the BASMAA Media Relations Project is to generate media coverage that encourages individuals to adopt behavior changes for preventing water pollution, including littering. The plan is to implement at least two press releases or PSAs focused on litter issues in each year (e.g., creek clean-up activities, preventing litter by using reusable containers, etc.).

### **Media Relations (Countywide Program)**

The Clean Water Program has already developed a media and community relations plan and contact list. The Program will regularly release articles and information to the appropriate publications, blogs and community publications on litter issues. Articles will be timed with regular events, such as Coastal Cleanup in September and the beginning of the rainy season, as well as other events, when applicable. The media and community outreach list contains many smaller publications and online sites as well as larger newspapers, which will increase the chances the articles are published and read. This effort goes beyond the scope of the Regional Media Relations plan by going deeper into the community through highly localized media channels.

### ***Media Relations***

The City of Pleasanton plans to publish local trash clean up days in local newspapers and invite the individuals and community groups to participate in the events.

## **Community Outreach Events**

*The City of Pleasanton plans to implement outreach campaign events for target markets where there are high trash load rates in the community. Outreach events include:*

- 1) Coordinate K-12 class presentations events in local schools educating students about the negative impacts of disposing trash in the environment.*
- 2) Schedule events on local radio stations and local TV30 informing the community about the City's stormwater NPDES requirements, which target eliminating trash down to 100% level by calendar year 2022.*

The Countywide Program will develop a "Litter Outreach" kit for community events. Going beyond the usual table with literature, the kit will include such interactive activities as pledge posters to foster commitment to behavior change, and directly relevant promotional items such as reusable bags. This kit will be provided to all Program member agencies for use at their local events. The *City of Pleasanton* plans to use the Litter Outreach kit at minimum of four events per year.

## **Percent Reduction from Enhancements**

The city of Pleasanton will receive a total of 8 percent reduction credit for implementing specific enhanced control measures described in *Enhanced Level of Implementation* section above. This

percent reduction is comprised of the following credits, consistent with the *Load Reduction Tracking Method*:

- Litter Reduction Advertising Campaigns 3%
- Outreach to School-age Children or Youth 2%
- Media Relations 1%
- Community Outreach Events 2%

These 8 percent reduction credits will be applied against the City of Pleasanton's baseline trash load and it is consistent with methods presented in the BASMAA report (2012b). A summary of all load reductions anticipated through the implementation of this plan are included in Section 5.0.

## **CR-4: Reduction of Trash from Uncovered Loads**

Although it is currently illegal to operate a vehicle that is improperly covered and which its' contents escapes<sup>3</sup>, vehicles remain an important trash source to MS4s and local waterways. Specifically, vehicles that do not secure or cover their loads when transporting trash and debris have a high risk of contributing trash to MS4s. Land areas that generate trash from vehicles include roads, highways (on/off ramps, shoulders or median strips) and parking lots. To help address the dispersion of trash from unsecured or uncovered vehicles destined for landfills and transfer stations, Permittees may require municipally-contracted trash haulers to cover or secure loads or work with municipal or private landfill and transfer station operators to educate waste haulers about securing loads and/or to enhance enforcement of existing regulations.

### **Baseline Level of Implementation**

The baseline trash load described in Section 2.0, assumes that prior to adoption of the MRP the City of Pleasanton has not adopted control measures to reduce trash from vehicles with uncovered loads. Therefore, implementation of any of the control measures described in this section is considered to be an enhanced implementation.

### **Enhanced Level of Implementation**

The City of Pleasanton will implement the following enhanced control measures to reduce trash from vehicles with uncovered loads prior to July 1, 2014.

The City Police Department will be informed about the City's MRP permit requirements and the target for eliminating trash to down 100% level by calendar year 2022. The local Police Department will be advised to fully enforce the California Vehicle Code Sections 23114 and 23115 for all vehicles violating the law including the local waste hauler, Pleasanton Garbage Service (PGS).

The City of Pleasanton is in a franchise agreement with PGS for hauling waste in the City jurisdiction. There is a section in the agreement that requires PGS trucks to be completely covered with suitable covering material when hauling refuse between points of collection and place of disposal.

### **Percent Reduction from Enhancements**

The City of Pleasanton will receive a 5 percent reduction credit for implementing specific enhanced control measures described in *Description of Enhanced Level of Implementation* section above. The 5 percent reduction credit will be applied to the baseline trash load to urban creeks from the municipal separate storm sewer system (MS4) owned and operated by the City of Pleasanton. This percent reduction credit was obtained from the *Trash Load Reduction Tracking Method Report* (BASMAA 2012b) and is presented in the Trash Load Reduction Summary Table 5.1 included in Section 5.0.

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<sup>3</sup> In accordance with the California Vehicle Code Sections 23114 and 23115, it is against the law to operate a vehicle on the highway which is improperly covered, constructed, or loaded so that any part of its contents or loads spills, drops, leaks, blows, or otherwise escapes from the vehicle. Exempted materials include hay and straw, clear water and feathers from live birds. Additionally, any vehicle transporting garbage, trash, or rubbish, used cans or bottles, waste papers, waste cardboard, etc. must have the load covered to prevent any part of the load from spilling on the highway (CVC 2011). Significant fines are possible for non-compliance.

## CR-6: Improved Trash Bin/Container Management

Receptacles used to place/store trash or recyclables prior to collection by a public agency or private waste hauler reduce the potential for littering and trash loading to stormwater conveyance systems and receiving waters (City of Los Angeles 2004). For the purposes of assigning trash load reduction credits, receptacles fall into the following two categories:

- **Private Trash/Recycling Bins:** A receptacle for placing trash or recyclables generated from a household, business, or other location that is serviced by a trash hauler. Bins are specifically-designed, heavy-duty plastic wheeled containers with hinged lids; or large multi-yard metal or plastic containers rectangular in shape.
- **Public Area Trash Containers:** A receptacle for placing incidental trash generated in public spaces that provides people with a convenient and appropriate place to dispose of trash. The design and size of public area trash containers vary widely, depending on their setting and use.

The effectiveness of bins/containers in reducing trash in the environment is likely dependent upon: the location and density of the receptacles, size of the bin/container in relationship to the size needed to service users, frequency of maintenance, and the ability of the bin/container to capture and contain the trash deposited.

### Baseline Level of Implementation

The baseline trash load described in Section 2.0, assumes that the City of Pleasanton has not implemented enhanced trash bin/container management practices prior to effective date of the MRP. The City of Pleasanton prior to implementation of the MRP placed approximately 40 trash bins (40 gallons each) in Pleasanton Downtown area where there are a blend of retail shops, commercial offices, and restaurants. The trash bins are emptied four times a week by the City maintenance staff and the local waste hauler employees (PGS). The City has also placed 427 trash bins (40 gallons each) in City parks. The bins in City parks are emptied by City maintenance crew two to four times a week based on each park's level of public usage.

### Enhanced Level of Implementation

The City of Pleasanton plans to install additional trash bins in new locations prior to July 2014. The new locations will include certain sections of Hacienda Business Park where prevalent land use is retail shops and restaurants.

### Percent Reduction from Enhancements

The City of Pleasanton will receive a 7.1 percent reduction credit for implementing specific enhanced control measures described in *Enhanced Level of Implementation* and *Baseline Level of Implementation* in sections above. The 7.1 percent reduction credit will be applied to the baseline trash load to urban creeks from the municipal separate storm sewer system (MS4) owned and operated by the City of Pleasanton. This percent reduction credit was obtained from the *Trash Load Reduction Tracking Method Report* (BASMAA 2012b) and is presented in the Trash Load Reduction Summary Table 5.1 included in Section 5.0.

## **QF-1: Enhanced On-Land Trash Cleanups (Volunteers and/or Municipal)**

On-land cleanups conducted by Permittees and volunteers have been successful in removing trash from identified trash hot spots and engaging local citizenry in improving their communities. Permittees have several programs in place to address on-land trash. Municipal efforts relate to ongoing beautification of impacted areas and coordination of cleanup events. Volunteer on-land cleanups involve the meeting of individuals such as; creek and watershed groups, civic organizations, businesses and others at designated or adopted on-land sites to remove trash. On-land trash cleanups are conducted as single-day events or throughout the year.

### **Baseline Level of Implementation**

The City of Pleasanton implemented the following on-land cleanup activities prior to the effective date of the MRP. The City of Pleasanton each year administers Coastal Cleanup Day and Earth Day for local volunteers to participate in removing trash from local waterways. These events are well attended by local community groups and individuals in the City. These measures are considered baseline because they were accounted for in the preliminary trash generation rates established through the BASMAA *Baseline Trash Loading Rates Project*. New or enhanced actions that began or are planned to begin after to the effective date of the MRP are described under the next section.

### **Enhanced Level of Implementation**

Prior to July 1, 2014, the City of Pleasanton will be conducting or coordinating the following new or enhanced on-land trash cleanup activities listed below. These on-land cleanups will be conducted or coordinated each year and the volume of trash removed will be tracked to demonstrate trash loads reduced.

Please note that **only trash that has the potential of entering the MS4 will be tracked**. As a result, large items (e.g., appliances, shopping carts, furniture, mattresses, televisions, tires, lumber, etc.) that will be removed during on-land trash cleanups are not part of the volume determination since they do not have the potential of entering the MS4.

### **Percent Reduction from Enhancements**

The total estimated annual volume of trash that will be reduced beginning July 1, 2014 as a result of implementing on-land trash cleanups is 1,500 gallons. This volume is equal to approximately 6.5 percent reduction in the baseline trash load to urban creeks from the municipal separate storm sewer system (MS4) owned and operated by the City of Pleasanton. Both values provided within this section are included in Trash Load Reduction Summary Table 5.1 included in Section 5.0.

## QF-5: Full-Capture Treatment Devices

As defined by the Municipal Regional Stormwater Permit (MRP), a full-capture system or device is any single device or series of devices that traps all particles retained by a 5 millimeter mesh screen and has a design treatment capacity of not less than the peak flow rate (Q) resulting from a one-year, one-hour storm in the sub-drainage area. A list of the full-capture systems and devices recognized by the San Francisco Bay Regional Water Quality Control Board (Water Board) is included in *Trash Load Reduction Tracking Method Report* (BASMAA 2012b). Trash loads reduced via publically or privately owned and operated devices within a Permittee's jurisdictional area that have been recognized by the Water Board as full-capture may be used to demonstrate attainment of trash load reduction goals.

### Baseline Level of Implementation

Prior to adoption of the MRP, some Permittees installed and maintained full capture devices. To avoid penalizing these early implementers, an applicable control measure implemented within a Permittee's jurisdictional area prior to the effective date of the MRP will be credited equally to a control measure implemented after the effective date. Therefore, the baseline level of implementation is as if no trash full-capture devices have been installed.

### Enhanced Level of Implementation

A total of 4 trash full-capture treatment devices will be installed in the City of Pleasanton prior to July 1, 2014. A list of these full-capture devices is included in Table QF-6-1. All devices listed within this table are enhanced trash control measures. Table QF-6-1 also includes the area treated and the calculated trash load reduced from each full-capture treatment device. These calculations are consistent with the approach described in the *Trash Load Reduction Tracking Method Report* (BASMAA 2012b).

### Percent Reduction from Enhancements

The total estimated annual volume of trash that will be reduced by July 1, 2014, as a result of implementing full capture devices is 350 gallons. This volume is equal to approximately a 5.8 percent reduction in the baseline trash load to urban creeks from the municipal separate storm sewer system (MS4) owned and operated by the City of Pleasanton. Both values provided within this section are included in Trash Load Reduction Summary Table 5.1 included in Section 5.0.



## QF-6: Creek/Channel/Shoreline Cleanups

Creek/channel/shoreline cleanups have been successful in removing large amounts of trash from San Francisco Bay area creeks and waterways; and increasing citizen's awareness of trash issues within their communities. Creek/channel/shoreline cleanups are conducted as single-day events or throughout the year by volunteers and municipal agencies. Since volunteers and municipal agencies have the common goal of clean creeks and waterways, their efforts sometimes overlap. This is apparent with some municipal agencies using volunteers to help assess and clean designated trash hot spots during single-day volunteer events.

### Baseline Level of Implementation

Trash reduced via creek/channel/shoreline cleanups was not accounted for in the City of Pleasanton's baseline trash load described in Section 2.0. Therefore, implementation of any of the control measures described in this section is considered to be an enhancement and can be used to demonstrate progress towards load reduction goals.

### Enhanced Level of Implementation

Prior to July 1, 2014, the City of Pleasanton will conduct MRP-required<sup>4</sup> and the following non MRP-required creek/channel/shoreline cleanups<sup>5</sup> listed below. Both types of cleanups will be conducted each year and the volume of trash removed will be tracked to demonstrate trash loads reduced. As part of the MRP requirements, City selected three locations along the local creeks for cleanup. In the MRP, this cleanup is known as "Trash Hot Spot Cleanup." City plans to add by calendar year 2014 additional single day cleanup events for local individuals and organized groups to participate to remove trash from "hot spots" and other locations along waterways. The additional cleanup events information will be provided in the next updated report.

### Percent Reduction from Enhancements

The total estimated annual volume of trash that will be reduced by July 1, 2014, as a result of implementing creek/channel/shoreline cleanups is 3.34 cubic feet. This volume is equal to approximately a 0.1 percent reduction in the baseline trash load to urban creeks from the municipal separate storm sewer system (MS4) owned and operated by the City of Pleasanton. Both values provided within this section are included in Trash Load Reduction Summary Table 5.1 included in Section 5.0.

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<sup>4</sup> Creek/channel/shoreline cleanups conducted in accordance with Permit Provision C.10.b.

<sup>5</sup> All "other" creek/channel/shoreline cleanups conducted by a municipality that are not required by Provision C.10.b.

## **5.0 SUMMARY OF TRASH CONTROL MEASURE ENHANCEMENTS**

The City of Pleasanton is committed to reducing the potential for trash impacts in local water bodies in the San Francisco Bay Area. The planned enhanced trash control measures described in Section 3.0 are also listed in Table 5-1. The enhancements are intended to comply with the 40% trash load reduction goal in MRP provision C.10.

**Table 5-1. Planned enhanced trash control measure implementation within the jurisdictional boundaries of the City of Pleasanton and associated trash loads reduced.**

Trash Control Measure	Summary Description of Control Measure	% Reduction (Credits)	Trash Load Reduced (gallons)	Cumulative % Reduction (Compared to Baseline)
Single-use Carryout Plastic Bag Ordinance (CR-1)	Alameda Countywide Ordinance	10%		10%
Polystyrene Foam Food Service Ware Ban (CR-2)	Local Ordinance	8%		18%
Public Education and Outreach Programs (CR-3)	Local and Regional Implementation	8%		26%
Activities to Reduce Trash from Uncovered Loads (CR-4)	Local enforcement of current laws	5%		31%
Improved Trash Bin/Container Management (Municipally or Privately-Controlled) (CR-6)	Expand Existing Trash Management Efforts	7.1%		38.1%
Enhanced On-land Trash Cleanups (Volunteer and/or Municipal) (QF-1)	Local Events	NA	2000	44.6%
Full-capture Treatment Devices (QF-5)	Installation of Full Capture Devices	NA	1350	50.4%
Creek/Channel/Shoreline Cleanups (Volunteer and/or Municipal) (QF-6)	Removing Trash from Local Trash Hot Spots	NA	25	50.5%

## 5.1 Annual Reporting and Progress Towards Trash Load Reduction Goal(s)

Consistent with MRP Provision C.10.d (i), the City of Pleasanton intends to report on progress towards MRP trash load reduction goals on an annual basis beginning with the Fiscal Year 2012-2013 Annual Report. Annual reports will include:

1. A brief summary of all enhanced trash load reduction control measures implemented to-date;
2. The dominant types of trash likely removed via these control measures;
3. Total trash loads removed (credits and quantifications) via each control measure implementation; and
4. A summary of progress towards trash load reduction goals.

Similar to other MRP provisions, annual reporting formats will be consistent region-wide. Annual reports are intended to provide a summary of control measure implementation and assess progress toward MRP trash reduction goals. For more detailed information on specific control measures, the City of Pleasanton will retain supporting documentation on trash load reduction control measure implementation. These records should have a level of specificity consistent with the trash load reduction tracking methods described in the *BASMAA Trash Load Reduction Tracking Method Technical Report* (BASMAA 2012b).

## 5.2 Considerations of Uncertainties

Baseline trash loading and load reduction estimates are based on the best available information at the time this Short-Term Plan was developed. As with any stormwater loading and reduction estimate, a number of assumptions were used during calculations and therefore uncertainty is inherent in the baseline trash load estimate presented in Section 2.0 and the load reduction estimate presented in this section. For these reasons, the baseline loading estimates presented in this plan should be considered first-order estimates. During the implementation of this Short-Term Plan and subsequent plans, additional information may become available to allow the calculation of a more robust baseline load.

## **6.0 IMPLEMENTATION SCHEDULE**

Implementation of enhanced trash control measures by the City of Pleasanton is currently planned to occur in a timeframe consistent with MRP requirements. A preliminary implementation schedule for all planned enhancements is described in Table 5-1. This schedule provides a timeframe for reducing trash discharged from the City of Pleasanton's MS4 by 40%.

Based on new information that becomes available during the implementation of this Short-Term Plan (e.g., revisions to baseline loading estimates or load reduction credits of quantification formulas, etc), or if circumstances arise during implementation of the Plan that were not anticipated at the time of submission, the City of Pleasanton may chose to amend or revise this Plan and/or the associated implementation schedule. If revisions or amendments occur, a revised Short-Term Plan and implementation schedule will be submitted to the Water Board via the City of Pleasanton's annual reporting process.

Table 6-1. Preliminary implementation schedule for enhanced trash control measures in the City of Pleasanton.

Trash Control Measure	Beginning Date of Implementation
Single-use Carryout Plastic Bag Ordinance (CR-1)	Prior to July 2014
Polystyrene Foam Food Service Ware Ban (CR-2)	Prior to July 2014
Public Education and Outreach Programs (CR-3)	Current and Prior to July 2014
Activities to Reduce Trash from Uncovered Loads (CR-4)	Current
Improved Trash Bin/Container Management (Municipally or Privately-Controlled) (CR-6)	Current and Prior to July 2014
On-land Trash Cleanups (Volunteer and/or Municipal) (QF-1)	Current and Prior to July 2014
Full-capture Treatment Devices (QF-5)	Prior to July 2014
Creek/Channel/Shoreline Cleanups (Volunteer and/or Municipal) (QF-6)	Current and prior to July 2014

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